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COLMAN'S RURAL WORLD.

DEVOTED TO AGRICULTURE, HORTICULTURE, HORSES, CATTLE, SHEEP, SWINE, ETC.

Established 1848.

ST. LOUIS, MO. WEDNESDAY, APRIL 9, 1902.

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COLMAN'S RURAL WORLD.

RONALD J. COLMAN, EDITOR.

LEVI CHASECOCK,

PUBLISHED
Published every Wednesday, in Chemical building, corner of Eighth and Olive streets, St. Louis, Mo., at one dollar per year. Eastern office, Clinton D. Colman, 807 Topeka Court, New York City. Subscribers will find the RURAL WORLD the best advertising medium of its class in the United States. Address all letters to COLMAN'S RURAL WORLD, Chemical Building, St. Louis, Mo.

Subscribers must bear in mind that the subscription price of the RURAL WORLD is one dollar a year, and that we do not receive single subscriptions for a less sum, but in our constant effort to enlarge our circulation, we do allow old subscribers to take actually NEW subscribers at the fifty-cent rate, adding a new name with their own for one dollar, and other new names at fifty cents each, but in no case do we accept two OLD subscribers for one dollar. We are willing to make a loss on a new subscriber the first year, believing he will find the RURAL WORLD indispensable over after.

We also send the RURAL WORLD in conjunction with either the twice-a-week St. Louis "Republic" or the twice-a-week "Globe-Democrat" for one dollar and fifty cents a year, and new subscribers may be added at the fifty-cent rate. Published at this remarkably low price—less than actual cost—all subscribers see the necessity of our dropping from our subscription list every name as soon as the year paid for expires. Thus it, on the printed slip on each paper you see John Jones Feb. '02, it indicates that the name will drop from the list at the end of February, and if he wishes to continue to receive it, he must renew his subscription. If he would do it a week or two in advance, it would save us the trouble of taking his name off the list and again putting it in type, when he renewed, which frequently causes mistakes.

This is the season to push the good work of getting new subscribers. Show your neighbors a copy of the RURAL WORLD, call their attention to the large amount of fresh, original, entertaining and instructive reading matter contained in each issue; tell them of our large number of intelligent correspondents, and how highly you appreciate its weekly visits and of the low cost at which it can be received. If our readers will spend but a portion of one or two days in enlisting in this work they can easily add more than thirty thousand names within the next 60 days. Who will engage in this work? Will not each reader, male and female, young and old, go into the field at once and see how much he can do to help not only the farmer, but the cause of progressive agriculture!

R. B. Overlander, a Kansas farmer, living near the little town of Leona, went to that state in 1876 and hired out as a farm hand. To-day, besides owning a 360-acre farm worth about \$100 per acre, he has five sons to be proud of. All but one have college degrees and they mainly paid their own way through school. One has two Yale degrees, another, a graduate of Yale and Kansas universities, won the much-prized Isaac Sweetser scholarship in Harvard recently while a student in the Harvard University Medical School; another graduate from Yale next year and one in Washburn college entered next year. The fifth has two Kansas University degrees. Two are now practicing law and the other three will be physicians.

The foregoing from the Topeka "Mail and Breeze" tells a story that is being repeated in all the essential features thousands of times daily in this land of ours. The fact gives the man the opportunity, affords him a home and living for himself and family and permits him to raise a family of children to be proud of, attend college, and in the end they leave the farm to become lawyers, doctors, engineers, merchants, ministers, teachers, etc., but rarely farmers.

A CHEAP PAINT.

Nothing so improves the appearance of a farm as having the barn, out buildings and the fences adjacent to the house all painted. But many times the expense is too great and the buildings and fences are weather-stained, and the otherwise well-kept farm does not give the trim look so desirable. There is no one but takes a pride in things of which he is owner that looks well. A very satisfactory paint is said to be made by mixing lime with skim milk. This mixture may even have some coloring matter put in. The directions are to use water lime, which can be bought in paper sacks and needs no slackening. One-half pound of lime to a pound of milk is used on unpainted surfaces. On smooth surfaces it must be thinner. The essential point in using this mixture for painting is not to have it too thick. Keep the mixture well stirred when putting it on.

A test of the value of such paint might be made early in the season, and if found satisfactory, then more extended use might be made with it in improving and

saving farm buildings. Then, too, some practice is required in the mixing and to learn the proper consistency for such paint before the most effective results can be secured.

A GOOD COMBINATION.

The editor of the Columbia (Mo.) "Statesman," having noticed a farmer living near town driving a wagon loaded with manure, made inquiry of him and learned that he got the manure free at the livery stable and was hauling it home to put on his land. "You see," said the man, "I kill two birds with one stone. I haul my wood to town and take back a load of this fertilizer. It doesn't pay to be hauling an empty wagon, when I can take a load home." Next summer we will see me hauling to town the finest potash, berries, roasting ears and vegetables that come to market."

The "Statesman" makes this comment: "The farmer is one of those thrifty, self-reliant, uncomplaining fellows. He really raises the best of everything and gets the top of the market for it. He never talks hard times, has a cheerful message for everybody, and, while not wealthy, is living comfortably. He hasn't a college education, but has 'horse-sense,' which is better."

We commend the example of the "Statesman's" farmer friend to our readers. There is a display of "horse-sense" in the way he manages to enrich his soil that is admirable, but there is also an opportunity there to make good use of a "college education."

We grant that if a man can have but one, "horse-sense" is to be preferred to a college education, but the two can be advantageously harnessed together as a team for use even in hauling wood to town and manure back to the farm. There are some things about livery stable and barn yard manure and their effect on soils and crops which the right kind of a college education would enable one to know better than he can know them without that education.

TREATMENT OF BLOAT.

Owing to lack of feed cattle will be turned on grass this season as early as possible, and the temptation will be to expect the stock to depend largely or wholly on the green forage as soon as possible. Many farmers have learned by experience that loss is frequently incurred by lack of attention when cattle are first turned out to pasture. Very young grass is tender and juicy, has a good deal of succulence and water in it, and but little else; this is especially true of half-grown clover, and the cow must eat large quantities before she gets the required solid matter. Bloat or bloaten is often induced by clover, and unless attended to promptly and properly, death may result. If the cows are left on the clover a few minutes at first and watched closely, lengthening the period each day, until they become accustomed to the young clover, all danger may be avoided.

Many remedies are prescribed for bloat, and there is less disposition to use the knife as a means of relief than formerly, as many farmers, not knowing where this operation should be performed to relieve the cow, often caused her death when applying this remedy. When the cows are first turned on clover they should be given a feed of dry roughage before leaving the barn, for several days.

A farmer gave the following remedy to relieve cows that were suffering from bloat:

Two tablespoonsfuls of black gunpowder dissolved in warm water.

This man stated that in 30 minutes after the gunpowder was given to a cow suffering from eating too many apples she was eating grass. He also reported that a Jersey cow that would bloat on eating dry clover that had neither rain nor dew on it was successfully treated with the gunpowder remedy.

A safe treatment is to force a piece of garden hose about six feet long down the throat, which will permit the gas that has formed to escape. Baking soda is a good remedy, and combining with the gas thus reducing the pressure.

Carbonate of ammonia in doses of three or five drams is one of the best medicines to give, as it has the same effect as the soda, besides being a stimulant to the action of the heart.

These remedies will, of course, relieve bloat that is caused later in the season, due to eating alfalfa, sorghum or new corn. It is necessary to give cows prompt treatment, as bloat is quick in its results if the animal is not relieved.

CONTINUED ON PAGE 2.

OSAGE ORANGE.

Editor RURAL WORLD: Replying to your request for information as to the durability of the Osage orange, I would say that it is the superior wood for posts and for all uses where strength and proportioned use are required. In our county the mulberry has pretty well disappeared, and oak is the most common kind of material for posts. The white oak and burr oak are being exhausted at a steady rate, and forests in general are being subjected to a destructive influence at the hands of the white man and his ax. Oak posts made from young trees are of brief duration, lasting four, six or eight years. They are but little superior to walnut, and sometimes not as good. In late autumn of the past year I reset some Osage orange posts which were originally set in the autumn of 1894, and I found the posts as sound as ever, although some of them were only three or four inches in thickness.

Farmers should wisely look ahead a few years and provide against a severe

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SOUTHWEST MISSOURI NOTES.

S. E. Bates, Eastern St. Clair and Northern Vernon.

Editor RURAL WORLD: As mentioned in an item from this section last fall, this portion of Missouri was abundantly blessed with fall rains, good weather, finest of fall pastures and best of health, for which our people are truly thankful.

The past winter came on late, but severe, and much fear was had on account of the shortage of feed for stock.

However, considering all, we had an excellent winter; best of all, we harvested the only good crop of ice that we have had for years, and although the winter was more severe than usual, it was steady cold and health was excellent.

Stock became accustomed to the steady cold and fared well; even those without shelter did better than in many of our mild and changeable winters with plenty of feed.

There was no feed tramped into the mud, for there was no mud, and the farmers tried to save feed and threw out only as much as would be picked up.

Many farmers remarked that it took more feed than in other winters, but this, no doubt, was due to the fact that the winter was colder and the feed, on account of the drouth, did not contain the nourishment as in good years.

The value of sorghum, Kafir corn and cow pease as feed and drouth-resisting plants was thoroughly demonstrated last year, and it is predicted that many patches of these plants will be planted this year, so that in case of another drouth people will at least be supplied with stock feed.

The writer is unable to say how many snows we had, but old settlers say that we had more than in many years, and certainly as much or more than we had during the preceding three winters.

It was early, often and late; the ground was continually covered for more than thirty days, leaving on the 21st and 24th February. During all this time we had only two half days that it thawed enough to show water in exposed or low places. Sledding in this section is unusual, but those who had sleighs had plenty of opportunity to use them the past winter. During the time that the ground was covered with snow many of our wild birds died, for there was no seed from weeds or grain to be found, and the birds were no doubt too weak to fly to warmer sections of the country. Even quails were found dead and showing no signs of injury, and there being no feed in their crop, they must have starved.

After the snow left, spring seemed to be with us, weather was fine and farmers were soon busy sowing oats; gardens were made and potatoes planted, but few got to finish, for on March 11, just as the ground was getting dry enough to be in, there was a heavy snow, melting as it fell, but turning colder at night. There was plenty of snow to give us a "white Easter" morning in spite of not having had a "Green Christmas." We hope that since the ground hog has had his "six weeks" and more he will soon come out to stay.

The conditions for sowing wheat last fall were first class and much was sown, as it was the only full crop we had last year. The wheat furnished excellent fall and winter pasture for young stock, and, having the finest of protection by continual snow during the coldest part of the winter, now looks fine, and everything being favorable should give a good yield.

The meadows likewise furnished a good fall growth, and where not pastured too much, having the snow protection, should likewise give a good crop if the season is favorable.

It is the opinion of most farmers that the drouth being followed by plenty of rain in the late summer and fall, the meadows will be in better condition than anticipated.

Our farmers seem to have reconciled themselves to the fact that with the years of fat there go the years of lean, and are eager to try another year, with the hope that the season will be more favorable than last.

From the statements of the banks at

drouth in regard to posts, for a deficiency is sure to come. There is a vast amount of idle lands in our state which should be devoted to the growing of trees, and on each farm there may be an acre or more of land specifically given to the wind-break or grove of Osage orange trees which will furnish an abundant supply of posts and other valuable material for use on the farm.

JASPER BLINES.

Clark Co., Mo.

MORE TELEPHONE INFORMATION WANTED.

Editor RURAL WORLD: I should be greatly obliged to M. Benway of Linn County, Mo., for further information as to the telephone system of which he speaks in the issue of March 5. I would be glad to have the by-laws. With reference to the 50 towns spoken of, do you have to pay any extra toll over and above your \$1 per month?

I would like to know what of phones was tried and found wanting and what kind proved satisfactory.

Like Mr. Benway, I think the telephone a good thing to have, and nothing is too good for the up-to-date farmer.

We have a telephone system here in this locality, but it is too expensive, as we have to pay \$12 per year, besides a toll from 15 cents up to 30 and 40 cents to all towns except the ones nearest to us. I believe there are about 30 farms connected in the two towns of Hillsboro and Butler.

We are trying to organize a co-operative or county system, to see if we can get just as good service at actual cost, and hence this inquiry.

G. W. RAINES.

Montgomery Co., Ill.

PEBBLES FROM THE POTOMAC.

Editor RURAL WORLD: The discussion of the life-insurance problem through the columns of this paper has proved to be a very interesting topic. In a recent issue we read a well-written article from the pen of Mr. M. E. King of Kansas, who presents concisely conclusive evidence that life insurance merits the careful consideration of every individual interested. I carry \$3,000 in a bank account and my assessments cost me, per month, less than the price of a good cigar a day. The organization has paid in the course of its existence millions of dollars to widows and orphans, and thereby kept from want, in many instances those who were cast on their own resources. The farmer, as well as the mechanic and professional man, is interested in this question. The argument has been advanced that the fraternal organizations often fail after one has paid dues for many years. This is true. The same element of danger is common to all our great financial institutions—the bank, building and loan associations, bonds, stocks—all subject to loss by fire, accident, or other causes.

Editor RURAL WORLD: The old-time

insurance companies, as well as other institutions of a speculative character, have served to warn the promoters of these organizations to shun the shoals and quicksands of unsound business methods in the life insurance business just as essential as they are in conducting the affairs of gigantic corporations, and out of the wreck of the numerous insurance failures, experience has proved to be the keynotes of success.

Can the farmer of moderate means find a better investment for a few dollars a month than in a good fraternal insurance organization? In our opinion the investment is a wise one. Another favorable feature that is worthy of consideration in co-operating with these fraternal organizations is the fact that it broadens one's acquaintance and in time of need, should misfortune come, a welcome hand is ever ready to contribute to the relief of the member who is in no condition to help himself.

The state of Missouri has got its \$25.

The state of Missouri chartered a loan association a few years ago, and the president of the association came around making loans to farmers. He loaned \$1,500 to one farmer, with promise of another \$1,000 at the end of one year, and agreed to carry the farmer until his 25-acre orchard came into bearing. At the end of the first year the president informed the farmer that values had decreased in his part of the country, and he could advance no more, although the farmer had set 20 acres more to orchard.

The old gentleman was about twenty miles from home he could not follow them around and get home, so he came home, and that was the end of it.

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The Dairy

BUFF JERSEY'S WAY.

EDITOR RURAL WORLD: It may be of interest to your readers who are interested in dairy work to know how Cedar Hill Farm milks 40 cows, separates the milk and churns before breakfast, and we have breakfast at 6:45 o'clock. At 4:45 a.m. we get up; the farm manager goes to the horse barn and feeds the horses (the horse barn is separate from the cow barn, as should be the case on every farm); the herd manager feeds the cows their feed of grain; the swine herdsman sees that the bedding is moved forward in each cow stall and that the cows are clean; and while this is being done a scribe has cleaned the flues, raked down the banked fire under the boiler, replenished it and put the cream in the churn. Then go to the cow barn and find the hands of the barn clock turning the 5 o'clock mark, at which point we all begin milking on the minute, every day of the year. I milk Dot, Daisy, Rosette and Lady, and I know that by this time the steam is up enough to run the engine for churning; so I take two five-gallon cans of milk from the creamery and start the engine. While the churn is starting I bust myself weighing the two cans of milk, putting the separator together, letting the separator and letting the gas out of the churn. I then return to the barn and milk Aggie and Zip and then am free to carry up more milk and attend to the chores.

Thirty minutes after the churn starts the buttermilk is ready to draw off. I draw it off through a cream strainer into a large milk vat, then run in water, wash the butter and salt it in the churn at rate of six ounces of salt to the gallon of cream, the cream representing four pounds of butter to the gallon. At this time the morning's 300 pounds of milk is ready to be separated. As fast as the cream is collected it is passed over the aerator and cooled to 50 or 55 degrees. The herd manager gets the calves' milk fresh from separator and feeds the calves. The swine herdsman taking the remainder of the warm milk for the pigs, and while the calves and pigs are being fed the cows are given their morning feed of ensilage, so that at 6:30 everything is out of the way and we go to breakfast.

After breakfast my churning is worked by the revolving churn, then the butter is put on a lever worker and worked just enough to fit it nicely, and then our assistant (a girl of 11 years of age) wraps the pound prints in parchment paper as fast as I put them in form with a Lafayette pound printer. This system is carried out each morning every day of the year, and I may also add that I do not recollect ever having had to call my boys in the morning; they are up before I am every day.

Last week we sowed some rape and will sow Canada peas and oats this week. We have our sorghum seed ready for planting. It cost \$2 per cwt., which is quite cheap for this year.

BUFF JERSEY.
Warren Co., Ill., March 31.

HELPFUL DAIRY NOTES.

EDITOR RURAL WORLD: One of our most successful men in the dairy business in the blue grass country, in talking to me about his methods, etc., said we had to keep in mind that the bacteria inhabiting milk vessels were of a microscopic size and that seems which appear clear to the naked eye may in reality be teeming with millions of these minute organisms ready to do mischief in the milk; that there is nothing gained by patching up old dairy utensils. "Never neglect the care of the churn," he says, "for here is where there is so much loss—the slightest negligences will cost one the price of many a pound of butter."

Business methods should be used in the dairy business, as it pays one double to use them. This dairyman has all his utensils made to order out of the very best, and has all the joints made round. After use he rinses in cold water, then makes a hot soda of rain water and pearline to cleanse well, then soaks, using plenty of hot water, wipes perfectly dry and sets out in the air and sunshines to dry. No place about a farm should be so immaculate as the dairy.

I use this friend's methods, because he is so successful. He requires the milkers to be free from tobacco and has them wash their hands in hot borax water before milking, as this cleanses and also disinfects. A little black rim under the nail may contain poisonous germs that would be fatal to milk and butter.

Long illnesses from typhoid fever, etc., are the result often of carelessness in the conduct of dairy work. Absolute cleanliness is the only safeguard—cleanliness, eternal vigilance and industry are the necessary requirements to success. Nothing takes on impurities so quick as milk and butter.

KENTUCKE.

THE RIPENING OF CHEESE, like the souring of milk, is due to the action of the minute organisms called bacteria. These bacteria are now known to play a highly important part in almost all branches of dairy work. The principal change that takes place in cheese during the process of ripening is the conversion of its insipid curd into a mellow and easily digestible food substance. This change in texture of the curd is accompanied by a gradual development of the characteristic flavors that so largely determine the commercial value of different descriptions of cheese.

The food for the cows should be of such a nature that no bad taste will be imparted to the milk.

Get the milk from the barn into a cool, well ventilated place as soon as possible after it has been drawn.

Rheumatism

Is a racking on which you need not suffer long.

It depends on an acid condition of the blood, which affects the muscles and joints, causes inflammation and pain, and results from defective digestion and a torpid action of the liver, kidneys and skin.

Scholars, lumbago and stiff neck are forms of it.

"Hood's Sarsaparilla" has cured me of rheumatism. I was so I could not lift anything and my knees were so stiff I could hardly get up or down stairs. Since taking three bottles of Hood's Sarsaparilla I have never felt the symptoms of rheumatism, and I greatly recommend Hood's for this disease." Mrs. Hattie Turner, Bolivar, Mo.

Hood's Sarsaparilla and Pills

Neutralize the acidity of the blood, perfect digestion and excretion, and radically and permanently cure rheumatism.

SOUTHWEST MISSOURI NOTES.
S. E. Bates, Eastern St. Clair and Northern Vernon.

(Concluded from Page 1.)

THE DAIRY BUSINESS progressed well during the past winter and our cheese factories at Appleton City, Taylorville, Rockville and Prairie City speak well for the industry, considering last year's drought; for although the patrons had no corn to sell they sold a few hogs and calves and had their regular monthly "milk checks" in addition, getting better prices than in plentiful years.

THE FIRST CORN HUSKER and shredder in this community was operated last fall and it was indeed a needed machine, for the corn was very small and mostly "nubbins"; but this machine picked out the "nubbins" and knocked off the worm dust and dirt better and quicker than could have been done by hand, shredding the fiber and leaving it available in the barn without assistance, an ordinary hay barn easily holding 40 acres of shredded fodder. Being in the dry and in a condition to feed in either there was practically no waste. The only care to be taken is to have the corn and fodder ripe and dry enough so as not to heat when stored away. After the silo and where the corn and fodder are wanted separate, this is no doubt the best way to handle and store corn fodder.

THE FIRST MANURE SPREADER to be introduced into this country was purchased this spring by Henry Hand, who, by the way, is the leading dairyman in this part of the state and who was also the first man to build a successful silo last summer. Mr. Hand holds various positions in the different dairy organizations and many of your readers no doubt know him personally. The writer has not seen the spreader in operation, but I do not doubt that it will more than pay for itself in the hands of Mr. Hand, for he keeps all stock in barns and counts the manure made as an item of profit. Its value has been thoroughly demonstrated when properly applied on the fields.

OUR RURAL FREE DELIVERY was put into operation on March 15, with three routes out of Appleton City and two routes to be put into operation out of Rockville on May 1. Four star routes and six post offices will be discontinued. Many seem to think it will be a great advantage and others who are and are now daily served by the star routes think it a disadvantage, as their Star Louis and Eastern mail route is there twenty-four hours later than when carried by star route. No doubt there will be much adjustment and many changes necessary in the future before the system will give the best results. However, the patrons should give the postoffice department sufficient time, and no doubt it will be improved just like the once-a-week star routes of years ago were changed to daily routes.

The latest news of development for this portion of the country is the Oscella, Monegaw Springs and Western Railroad, to be built from Oscella to Monegaw Springs and eventually westward, probably to Rich Hill or Butler. Work is to begin on the line this spring.

There will be no peaches and berries in this section this year, but unless something happens we expect a fair apple crop.

THE SENATE PASSED THE OLEO-MARGARINE BILL.

The oleomargarine bill passed Thursday, April 3, by the Senate by a vote of 39 to 31 differs in some respects from that passed by the House of Representatives. It provides that oleomargarine and kindred products shall be subject to all the laws and regulations of any State or Territory, or the District of Columbia, into which they are transported, whether by land or water.

TO CURE A COLD IN ONE DAY
Take Laxative Bremo Quinine Tablets.

All druggists refund the money if it fails to cure. E. W. Grove's signature is on each box. **See.**

SERMON ON MILK.

Milk is a necessity in almost every household. It comes next to bread and water in importance.

Milk comes in easily digested form for the four kinds of nutrients required by the body; namely, protein, fats, carbohydrates and mineral water. It is one of the cheapest of foods, too.

There is so much milk that is not as clean as it ought to be and there is so much said about it that just as little milk as possible is used by some families, mostly in the cities. I did hear once a farmer's wife say she never used a drop of milk unless it was cooked or boiled from the time the cows were put in the stable in November until the cows had shed their outer coats the next spring, writes A. X. Hyatt in the "Farmers' Sentinel."

She declared milk could not be perfectly clean when cows' flanks were plastered with manure. And she was right. No one would eat from a kettle of soup after it had been under a cow and as much dust, etc., had fallen into it as falls into a pail of milk when special care is not taken to keep cows clean. The finest strainer would not make it clean. Milk is best raw, if pure.

The practice is increasing of rearing children on substitutes for mothers' milk and especially on cow's milk. When the writer was a baby no mother thought of rearing her babies on other milk but her own, alive and well. A child reared on cow's milk in those good old days would be called sugar-tit as long as she or he lived.

Milk was good when the writer was a kid too. At that time there were no John Goulds or W. R. Heards, who advocated winter dairying and tying up cows in the stable from Oct. 1 to May 15 following, and stuffing them with strong foods to their "full capacity" and milked close up to calving.

Bacteriologists declare now that some of the milk supplied to the large cities to be sucked through rubber nipples by little babies, contains as many as 50,000,000 germs per cubic centimeter and a majority of them wicked, low-lived insignificants. Is it any wonder babies' digestive tracts get deranged? Statistics show that about one-third of all deaths are of infants and a very large percentage of these die of diseases of the digestive organs.

No article of food can be contaminated and adulterated as easily as milk without changing its appearance. Milk looks much the same whether it contains 2,000 or 200,000 bacteria to the cubic centimeter. With even as much as has been learned, a test for quickly telling the purity of milk is yet to be born. Trained bacteriologists require several days to examine a cow's mess.

Too many farmers do not know what is meant by a clean dairy. They show visitors around with pride and their cows in dark, close stables. Some of these persons can be taught better methods, while it is fooling away time to try to change the methods of others. None are so blind as those who will not see and none are so hopeless as an ignorant man who thinks he knows nearly everything.

It should be the duty of some competent person to go from one farm to another and examine the cow stables, drainage, ventilation, food, water, yards, pas-

**ELECTRIC HANDY FARM WAGONS**

make the work easier for both the man and team. The tires being wide they do not overturn the ground; the tires are made of a special composition of the short life. They are equipped with our famous Electric Wheels any height from 6 to 10 inches. White hickory axles, steel beams, turners to connect the wheels, and a steel frame to support the wagon. We make our steel wheels to order in any size and weight.

ELECTRIC WHEEL CO., BOX 74, QUINCY, ILL.

ture, methods of milking and handling milk, the exercise of the cows and all matters connected with their health, care and management. How would it do to spend money which is spent for cheese instructors in this way for a year or two? If we don't know how to make cheese by this time we never will. Poor milk is a worse abomination than poor cheese. Poor milk is a sin, a shame and a crime.

LENGTH OF LACTATION AMONG DAIRY COWS.

Cows vary very considerably in the length of time which they continue in milk. Variation in this respect is characteristic not only of individual cows, but also of whole breeds, some strains being noted for having a much longer period of lactation than others. As a rule, the heavier the milker a cow is, the longer will she continue in milk. There are, of course, exceptions to this rule as to all others, but, speaking generally, it will be found to apply to the majority of dairy herds.

The encouragement and cultivation of length of lactation is a point which is deserving of careful attention among dairy farmers. It is only natural that the longer a cow can be kept in milk, the greater will be the profit derivable from her—provided, of course, she is yielding milk in such quantity as to more than compensate for the food which she is consuming. It is a mistake to allow cows to go dry from three to four months before calving, if by the exercise of ordinary care and the display of a little liberality in feeding the milk flow can be maintained for eight or ten weeks longer. There is a special objection to allowing cows to run dry in this way in the case of heifers with their first calves, it is well known that if heifers are allowed to run dry at an early date after producing their first calves there is a natural tendency on the part of the animal to go dry at the same time after producing their second and subsequent calves. This being so, it would naturally follow that after a few years cows in which the tendency to run dry is encouraged in this way would very soon deteriorate into a disappointing race of milkers. In this matter, as in many others bearing upon farm stock-breeding, much may be done by careful selection and by breeding from heifers descended from cows of a good milking strain and known to be themselves capable of creditable work at the pail.

SALES OF HAND SEPARATORS.

The increased demand for hand separators seems to be so general that manufacturers are unable to supply the call. We learned that in one territory West, the Sharples people sold last year 300 hand separators to an agency. They already have orders for four carloads since the first of January.

This proves two facts. There is an extraordinary demand for hand separators in the world, buy the McCormick; it is the unit of measure in harvesting machines.

SHARPLES "TUBULAR" FARM CREAM SEPARATORS.

No agent will bring you a Sharples Separator. It is the only separator on trial free of cost. Though hundreds of our latest have gone on trial, not one has been returned. The trial is, of course, for the buyer to buy the separator, enough to pay big interest on the whole first cost, and they turn up in a few months and are repaid with little driving power and are entirely simple, safe and durable.

Separator improvements are many. These new machines are ahead of anything else known. We are making super separators for 19 years now (in America) and are proud of them, but these new separators do not demand anything either ourselves or anyone else.

Other agents will try and draw comparisons between our separators and ours, and the Sharples separators are the ones wanted.

MILK RICH IN FAT is also rich in cream. This fact is not accepted by every one, but as a rule careful tests prove that it is true. Consequently buying milk at a cheese factory by the Babcock test is a fat method. Even if one lot of milk rich in fat does not contain quite so much cream as another lot with the same percentage of fat, the value of cream is about the same as the milk deficient in cream. This being so, it would naturally follow that a few years cows in which the tendency to run dry is encouraged in this way would very soon deteriorate into a disappointing race of milkers.

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SHARPLES TUBULAR FARM CREAM SEPARATORS.

Send for Catalogue Agents Wanted.

Sharples Separator Co., 55-92 West Jackson St., Chicago, Ill.

West Chester, Pa.

SIBERIAN BUTTER.

Speaking of the development of the Russian dairy industry the Boston "Morning Herald" says:

We recently alluded to the new port which Russia is attempting to establish in the far north. This port is to be used for the shipment of agricultural products during the winter months. While the ports on the Baltic are open, however, a very large dairy business is carried on between Russia and Great Britain. Quiet recently the Russian government entered into a contract with a commercial house at Riga, a port to the south of St. Petersburg, to establish a direct line of steamers to London. These are to be equipped with special refrigerating plants, and weekly trips will be made from Riga, largely with cargoes of butter. Riga planned to collect this butter at the railroad stations on the Siberian railway, the trains starting at Ob. Special fast freights made up of refrigerator cars will be run, each car carrying about eight tons of butter. On arriving at Riga the butter will be inspected, and if it is thought necessary, repacked before being placed on the steamers. The hope is that this fast freight and steamer service will build up business in other lines, the principal article that it will depend on is butter, and the Russians hope to very largely supply the London market.

RAISING GOOD COWS.

I like to fuss with calves, writes T. Greiner in "Farm and Fireside." I like the calves because I like good cows and realize the fact that the foundation of a good cow is a good calf. Sometimes I come across a good cow that can be bought at a reasonable price, but the surest way to get a good cow is to raise her from a calf of known good parentage.

There are people who yet believe they can feed butter-fat into milk. My experience, however, is that when you have a cow that gives good milk, it will be poor, even if she has nothing but corn stalks or poor hay to eat. Feed determines the quantity of milk, while the blood of the animal determines the richness. For that reason it does not pay to bother with calves of blue milk stock (unless for selling milk, and hardly then).

When you have a cow that gives rich, creamy milk that butter makers and milk consumers like, rich milk she will give even if she has nothing but corn stalks or poor hay to eat. Feed determines the quantity of milk, while the blood of the animal determines the richness. For that reason it does not pay to bother with calves of blue milk stock (unless for selling milk, and hardly then).

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Horticulture

HORTICULTURAL TALKS.

I WILL CURE YOU OF RHEUMATISM

No Pay Until You Know It.

GRAFTING.—The work of top-grafting has already begun at my place. It is earlier than I have done it before, but I wish to make a thorough experiment with pecan and hickory grafting, and so have planned to begin early and make frequent trials.

One large hickory tree has been grafted to an improved variety, the best I have yet tested. Another was grafted to the fine pecan previously referred to. Also a number of small trees were grafted for the nursery.

A good many RURAL WORLD readers have lately received a bundle containing sample grafts and buds. Some of these samples are apple root grafts which, if planted and cared for, will develop into fine Jonathan trees.

Grape vines are most successfully grafted under ground; the cleft graft being used. The earth being removed the vine, if large, is sawed off below the surface at a point where a smooth surface about one and one-half inches in length may be had, so that the cion may be put in good shape. Saw down through the center of the stump about $\frac{1}{2}$ inches apart, it apart with a wedge made of hard wood which, if the stock is large enough to take two cions, one on each side, should be driven in the center. This being done, the surface which is to receive the cion should be cut smooth and clean with a very sharp knife. The cion, cut to fit the opening, should be placed so that the inner bark of both cion and stock come together. Should there be any question as to whether these inner barks are together, it would be well to have them cross at some point. Where stock is large and cion small it will be necessary to set the latter in a little in order that the inner barks may come together. If the stock is large there will be no need of tying, for when the wedge is removed the cions will be found sufficiently tight. The cions may have one or more buds. No wax is needed for underground grafting.

Fine, mellow earth is carefully filled in around the grafts and pressed firmly just where the union is made. The fine earth should come up to the top bud, covering the bud slightly, then put on about four inches of sawdust, leaf-mold or something of that nature, and leave entirely alone until the sprouts begin to come through. Then examine carefully to see if the sprout is from the graft or from the stock. Do not get impatient if growth does not show itself as soon as you would like, and go digging to find out if it is coming, for in so doing you can surely help the master any, and there is much danger of knocking off the buds or disturbing the grafts. Sometimes it is two months before grafts show themselves above the sawdust. When once up they grow very fast and should be ticed up promptly. Grafts on strong vines sometimes make a growth of ten feet the first season.

ABOUT PEAR BLIGHT.—I agree with Mr. Wallis that the Keiffer is not more exempt from blight than any other variety. Several orchards in this vicinity have gone entirely to pieces, and all have suffered more or less.

My own experience tells me that pear blight is more of a mystery than even the scientists are willing to admit. They tell us to remove the blighted limb at a point considerably below where the blight is seen, and that by so doing the blight will be held in check. Such treatment is advisable, for it gives us a result that is more or less gratifying. It has a tendency to check the blight, I am sure, but I can not admit that this is caused simply by the blighted limb being removed. I contend that the blight is checked by this treatment because of severe pruning, which checks the growth of the tree. I believe, like Mr. Wallis, that there is no positive remedy for blight, and doubt if there ever will be; yet there are ways by which it can be held in check; anything that will check the growth of a matured tree is advisable. My best results came from severe pruning.

STRAWBERRY NOTES.—While it is advisable to get them in early, it is best to wait until the soil is sufficiently dry to permit one to do a good job in putting the plants out. If roots are very long, a portion should be cut off with a sharp knife. Get roots down straight, well spread, with the crown just even with the surface, and press the earth firmly to the root.

Planting strawberries is one of the most particular jobs one can undertake. It pays to take time enough to do the work right, for thereby much will be gained in the end. I have known plantations put out in such a way that a slight touch with hoe or weeder would pull the plants out.

Four feet in generally agreed to be

EDWIN H. RIEHL.
North Alton, Ill., April 2, 1902.

CUTTING BACK PEACH TREES.

Editor RURAL WORLD: About 1882 our peach trees were badly winter-killed and we cut 100 of them back to stubs.

They were six-year-old trees and in fine condition before the freeze. Two rows were cut back to limbs about $\frac{1}{4}$ inches in diameter, half of these died; three rows were cut to limbs less than one inch, and all but three of these lived, but all are dead now; 50 trees were left untouched and 14 of these are living and made a full crop last year. I would not cut a limb over an inch in diameter and I would not cut until the buds were making a good showing. Two years ago I cut ten trees back; four made a fair growth, two died and the other four had better died; 50 trees not cut are in good shape for another crop or two. When I set another peach orchard I will cut back regularly every year, and but little more than usual in case of winter-kill.

C. D. LYON.

HANDLING AND MARKETING OF FRUIT.

(Paper read by H. Wallis at the St. Louis County Horticultural Society.)

This task assigned to me by our Horticultural Society is rather a difficult one for me to perform well, still I will do the best I can in presenting the views of a practical fruit grower living near the market of a great city. Experiences of fruit growers living a great distance from markets for their fruit crops may perhaps show it more advantageous to employ different methods in handling, marketing and shipping fruits, because conditions may be different, and no rules are without exceptions, yet some points given in this paper will be also of value to them. For this reason, then, not to be misunderstood, I have in mind especially the labor and duties of such fruit growers to whom fruit growing is their chief vocation and who live near a home market.

HANDLE WITH CARE is the first and main rule. Handle the fruit in gathering, assorting and packing as if it were costly glassware. The good appearance and quality of fruit will be better preserved, and such care will be well paid for in the better price obtained than for fruits badly handled.

It should be almost needless to say: Always do the picking and assorting at the proper time, when fruits are ripe enough and not overripe, discarding all small, inferior, wormy, knotty, bruised or partly rotten fruit, because it decreases the value of your goods to such an extent that you will receive more money for the less quantity than for the greater lot of an inferior mixture. By all means trashy fruit should never be offered for sale; yet it is done everywhere and all the time, as every one can see by strolling through the St. Louis fruit market. And what is the result of such practice? The overstocking of the market with such poor stuff reduces the average price for good and well-deserved earnings. This may be in opposition to the views of many who believe that good and fancy fruits always command a good, or even fancy price; but I say this is a fallacy.

Farmers' Call. We append to the foregoing the following letter:

Hermann, Mo., Sept. 9, 1901.
Slias Wilson, Atlantic, Iowa.—Dear Sir: I found a basket of McPike grapes at my home (set by you), on my return from the State Fair. I was Secretary for the horticultural judges. I appreciate it very much that you sent this basket, as I can show my neighbors this wonderful grape. I consider it king of all market grapes. HERMANN GRAPE NURSERIES.

Kalamazoo, Mich., Sept. 7, 1901.
Slias Wilson, Atlantic, Iowa.—Dear Sir: We beg to acknowledge receipt of a basket of choice McPike grapes, the quality of which far exceeded our expectation.

The size, flavor and general appearance satisfy us that there is no grape in the market that equals it. We feel that we can conscientiously urge the public to buy this wonderful grape. The McPike is certainly a great acquisition.

Louisville, Ky., Sept. 7, 1901.
C. D. BENET.

BEES AND HONEY.

The Maine Farmer tells of an empty house at Tenant's Harbor in which was found more than two hundred pounds of delicious honey. The bees had found entrance at a small crevice near the eaves. Though they took possession without the formal permission of the owner, they did not prove unprofitable tenants, as the honey was worth enough to pay a good rental. We think it would be a good idea to let them retain possession, for, as the house has not been occupied for several years, it may not be easy to find other tenants who will pay as well. We remember reading not long since of a man who made use of an old house by placing beesives in it, with holes cut opposite each hive, which were as many as he could find room for against the walls all around, and there they were summered and wintered in good condition.—American Cultivator.

If I would attempt to describe the best methods of handling of the different fruits, perhaps it might make a good sized book; therefore I will leave the particulars for every fruit grower to work out for himself. Only so much I will add: Every

THE HAZELTINE MOTH-CATCHER.

This moth-catcher has been widely advertised as a codling-moth destroyer. To test the merits of the moth-catcher, I had two of them placed in the College garden among apple trees. They were kept burning every night, with but a few exceptions, from June 7 to September 7. The insects captured were taken out and identified every morning.

Following is the result of the captures: Per Cent.

Decidedly beneficial insects—Inchneumon Flies were of all taken....70

Lady-birds were, of all taken.....24

Ground beetles were, of all taken....1%

Dung beetles were, of all taken.....6

Mosquitoes were, of all taken.....5

Fire flies were, of all taken.....2%

Crane flies were, of all taken.....1%

May beetles were, of all taken.....5

Squash bugs were, of all taken.....2

Cucumber beetles were, of all taken.....2%

Coddling moths were, of all taken.....9

The inventor of this trap-lantern moth-catcher boasts that he sold over 40,000 during the past season. If all these were in operation for four months, probably forty millions of decidedly beneficial insects were captured and destroyed.

Find a great similarity in the results of my experiments with those of other entomologists at agricultural experiments stations in the United States. In every case, without exception, for I am aware, no coding moths were taken.

Prof. Webster, State Entomologist of Ohio, advises us Canadians to impose a specific duty of \$5 on every Hazelton moth-catcher brought into this country, for he considers it not only an imposition, but a source of untold injury to the orchards of the country.—W. Lockhead, in The Canadian Horticulturist.

Planting fruit trees and berry plants is the order of the day. We have set out 1,000 apple trees, principally Ben Davis, and 1,000 peach trees, nearly all Elberta; also 200 Kieffer pear trees and three acres Michel's Early strawberry plants, Rock Spring Fruit Farm. The Ben Davis apple, Elberta peach, Kieffer pear and Michel's Early strawberry have come to stay. They make more clear money for the grower than do any other kinds we can plant.

Fruit of all kinds is setting nicely and will be out in bloom in the next two or three days. Strawberries will be a light crop.

Our people are setting out a great many trees and plants. One association has ordered over 300,000 strawberry plants for this spring setting, also 50,000 fruit trees.

The drudges sufferers have been receiving some aid from the outside world which they are very thankful for. The worst feature of the drought in this section is the fact that there is no seed for planting. Very few are able to buy seed, and will have to be contented to do without. Potatoes are selling at \$1.25, corn at \$1 and oats at 70 cents per bushel, and very scarce at these figures. A great many horses and cattle have died for want of feed where the owners were not able to buy feed. People located near the railroad fare better, as they can haul and sell railroad cross-ties at 25 cents each for good ties, and this makes them a very good living.

Some of our people have planted corn already and others have their ground ready to plant next week. Usually a great many plant corn in the month of April. In this section a great many will plant out tomatoes with the intention of canning them on the farm with the Foegger cooker, which is a great success.

D. S. HELVERIN.
Fulton Co., Ark., March 28.

THE MCPIKE GRAPE.

Reports on Fruits.

We are very thankful to our old subscriber and warm friend of the paper, Mr. Otis G. Parker, of Moravia, N. Y., for the following letter:

Many readers do not know that when they are tempted by some flaming advertisement to send for some "new and wonderful" thing that by writing to Prof. G. B. Brackett, Pomologist, U. S. Department of Agriculture, Washington, D. C., they can secure the exact facts in relation to any fruit, plant, grain, etc. No cost—it is a part of his business to answer concerning the McPike grape and its disseminator. It is worth the space please publish it."

Of course it is worth the space. Doubtless many of our subscribers are interested in grapes and will be pleased to have this authoritative report on the McPike. Mr. Brackett writes Mr. Parker as follows:

Replying to your postal card in regard to the McPike grape will say that as far as I am acquainted with this new fruit it is a very valuable variety for the northeastern states where it has been fully tested. I have been acquainted with the disseminator of this new fruit for many years and I can heartily vouch for his honesty and integrity in every respect.

You can rely most fully on whatever statement he makes in regard to this fruit. Mr. Silas Wilson, of Atlantic, Ia., the person who has control of the whole stock of this grape, is a very reliable man. At the Buffalo exposition it took first prize for the best new grape.—Farmers' Call.

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High Pressure Days.

Men and women alike have to work incessantly with brain and hand to hold their own nowadays. Never were the demands of business, the wants of the family, the requirements of society, more numerous.

The first effect of the pangs of poverty is to keep up with all these things as commonly seen in weakness or debility.

It is a great effort to keep up with all these things as commonly seen in weakness or debility.

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PATENT GROOVED**Tire Wheels**

For Farm Wagons
Any Size or St. Any Shape.
Held Only by the
NAVADA METAL WHEEL CO.
Havana, Ill.
We are the largest manufacturers of steel wheels and low bows ever made in the U. S.
Ask Write for Prices.

Live Stock

DATE CLAIMS FOR LIVE STOCK SALES.

May 7-8—Colin Cameron, Herefords, Kansas City.
June 19-C. E. McLane, Danville, Ind., at Indianapolis. Double Standard Polled Durham.

The "National Hereford Exchange," under the management of T. F. Bothwell, as follows:

May 27-29, 1902—Omaha.

ABERDEEN-ANGUS CATTLE.
April 10-11—Combination sale, W. C. McGavock, Manager, Kansas City.

June 10-11—Combination sale, W. C. McGavock, Manager, Chicago.

NATIONAL SHORTHORN SHOWS AND SALES.

May 9—at Columbia, Mo., Boone County Shorthorn Breeders' Association.

May 14-15—At Kansas City, Mo. W. T. and H. R. Clay, Plattsburgh, Mo.

October 22, 1902—W. V. Jessup, Rockville, Ind.; Charles F. Mills, Clerk, Springfield, Ill.

Dec. 3, 1902—Combination sale, Berkshires, Manager, A. J. Lovejoy, Roscoe, Ill.; Clerk, Charles F. Mills, Springfield, Ill.

ABERDEEN ANGUS IN THE MARKETS.

Editor RURAL WORLD: In the markets of the world the Aberdeen-Angus cattle invariably bring the top prices. Every bunch sold raises the "blacks" in the estimation of unprejudiced breeders of beef cattle. It is necessary to say unprejudiced because, though it may not be a fault, it is nevertheless a fact that too many otherwise good judges of live stock fail to acknowledge excellence in any breed of animals except the ones they are interested in propagating on their own farm. Too often a stockman who makes a specialty of raising Whites will almost angrily affirm that he has no use for Black Polled cattle. So some breeders of Berkshire hogs will tell you that they wouldn't give the snap of their fingers for the best Poland-China boar ever exhibited at a fair or stock show. When a stockman goes to market he has an opportunity to learn something about beef breeds, and those who are prepared to give credit where credit is due, go away with a most favorable impression of the Polled Angus cattle. It should be said that this favorable impression will grow into positive conviction if a trial be given them on the farm, ranch or range. There are several special excellencies about these black cattle which may be mentioned without disparagement to any other breed. They are by nature a peculiarly strong and healthy sort. Lump jaw or tuberculosis is seldom seen affecting an Angus steer. Then they are hardy, which makes them desirable as range cattle, because they are rustlers and travelers, too, when the weather is bad and feed scarce or covered with snow. They are good dairy cattle also, though not in the class with Jerseys and Holsteins. Lastly, they are good sellers, partly because they are popular, but mainly because discriminating buyers know, if they are buying to speculate, that these cattle are a safe surety, an investment than any other breed.

Melville, Ill.
J. P. VISSERING.

HIGH PRICE FOR BULLS.

In a letter, Hank Comstock mentions the recent sale of a Hereford bull at auction for \$9,000, and says that it is not necessarily too much for "the best," provided the buyer possesses high-class cows in such number as to make the investment available. In dairy circles he cites the Jersey bulls Stoke Pogis 5th and Pedro as having been profitable holdings to their respective owners, Miller & Sibley and T. S. Cooper, even at a valuation of \$15,000 each. He also says that that price would not have bought Merry Maiden's Son from C. L. Hood before he had obtained full brothers to him. This last might be amply extended. Duke of Darlington unquestionably added an increment of far more than \$15,000 to prices received for his progeny over what Mr. Darling could have obtained for them had they been by a bull of less prestige. Though Romeo H. Stephens sold his herd before the greatness of Stoke Pogis 3d had been demonstrated, E. F. Fuller, who re-collected its members, obtained a greater increment than \$15,000 from the fact that so many of its cows were by that bull. The late Dr. Hubbell would have been benefited more than \$15,000 by the super-excellence of Imported St. Heller who had chosen to sell his progeny instead of presenting them to people whom he liked. Circumstances may easily be such that a bull may be worth more than \$15,000. A syndicate once paid \$16,000 for the stallion Axtell, who more than repaid it in public stud fees, besides the use the owners had of him, resulting in many handsome profits.—Country Gentleman.

Lovers of the Shorthorns should not forget the grand offering of high-class cattle to be sold at Chicago on April 14 by Mr. George Bothwell of Netleton, Mo. It includes his entire herd of 1901, as well as good Scotch and Scotch topped cattle as he owns, and that means the entire offering is of a high order of merit. Send to Mr. Bothwell for catalog, and then attend the sale.

Calf Scours Cured

Hood Farm Calf Scour Cure
and
Digestive Powder

"My calf was taken 24 hours after birth, and had a watery, foamy nature, was weak and staggered and refused its food. Three doses of Hood Farm Calf Scour Cure and Digestive Powder brought it around all right and it has done well ever since." M. E. BURR, Hanover, Pa.

"Hood Farm Calf Scour Cure and Digestive Powder cured three bad cases of scours in my herd. I find the Digestive Powder gives the calf strength and appetite." L. C. KATHRINE, Hebron, Conn.

Two sizes of each—\$1 and \$2.50, to any railroad express point in the U. S. 25¢ additional for orders amounting \$10 or more by express. Send for circular on Calf Scour Treatment. Mention this paper.

C. I. HOOD CO., Lowell, Mass.

CLASSIFICATION OF PREMIUMS.

For the beef breeds of cattle recommended for the St. Louis World's Fair by Hon. Charles E. Leonard, member of the committee of the National Live Stock Association, to whom said classification was referred for preparation and submission to the executive committee representing the Live Stock Breeders' organization of the United States.

Sections 1st, 2d, 3d, 4th, 5th, 6th, 7th, 8th, 9th and 10th.

1. Bull 3 years old or over.

2. Bull 2 years old and under 3.

3. Bull, 18 months and under 2 years.

4. Bull, 12 months old and under 18 months.

5. Bull, 6 months old and under 1 year.

6. Bull, 6 months old and under 3.

7. Cow, 3 years old or over.

8. Cow or heifer, 2 years old and under 2 years.

9. Heifer, 18 months old and under 2 years.

10. Heifer, 12 months old and under 18 months.

11. Heifer, 6 months old and under 12 months.

12. Heifer, under 6 months old.

SWEEPSTAKES.

Competition limited to prize winners in sections 1 and 2; 3, 4 and 5; 6 and 7, and 8, 9, 10, 11 and 12, respectively.

13. Senior sweepstakes, bull, 2 years old and over.

14. Junior sweepstakes, bull under 2 years old.

15. Senior sweepstakes, cow or heifer, 2 years old or over.

16. Junior sweepstakes, heifer under 2 years old.

GRAND SWEEPSTAKES.

Competition limited to prize winners in sections 1 to 6, 7 to 12, respectively.

17. Best bull any age.

18. Best cow or heifer any age.

HERDS.

19. Aged herd, consisting of one bull 2 years or over, one cow 3 years old or over, one cow or heifer 2 years old and under 3; one heifer 1 year old and under 2, and one heifer under 1 year.

20. Young herd, consisting of one bull under 2 years old, two heifers 1 year old and under one year old. All except bull must be bred by exhibitor.

JUDGING BEEF CATTLE.

John Gosling of Kansas City, the expert judge of beef cattle, lectured recently to the students of the Kansas Agricultural College. The judging room is 96 feet long and 36 feet wide. On each side of the entire length are arranged three tiers of seats, the tiers rising one above the other. There are seats for 350 people, and every seat was full. Fifty students who could not find seats sat on the sawdust in the area where the cattle stand to be judged.

With this audience of 400, Mr. Gosling gave a lecture on "Quality and Flavor in Beef." He said that the highest percentage of dressed carcasses to live weight in a beef animal that he had ever known was 72 per cent. The prize winner at Smithfield (England) show this year dressed 70 per cent, but the beef was not satisfactory to the consumer on account of the heavy fat. The Kernel prize Angus cattle dressed 67 per cent. Feeding cattle as they come from overfattened steers, and the flavor of the beef where such high per cents of dress weight were made was not what the consumer wanted. Prize beef should be sold by telephone.

The best edible beef is secured where the dressed carcass is 62 per cent of the live weight. The flavor of the meat and the proportion of fat to lean best suits the American taste when this percentage of dressed weight is reached. Americans do not want to eat much fat in beef, they prefer to take what fat they want in the form of butter.

Mr. Gosling stepped to a blackboard and drew the various cuts of roasts and steaks, in each case showing cuts having heavy and light fat. He showed how thick a lining of fat was desired by the consumer and then showed how to detect this condition in the live animal. He said that overfatting spoils the flavor of beef by reducing the amount of the juice and by adding fat, which spoils the flavor. With underfatting the flavor is also poor, the meat lacks both in juice and in fat. Where the animal is fattened and in fat, the flavor and the taste of the beef are good, but the flavor is lost when the animal is overfattened.

The man who makes beef should study the production of flavor in his product as thoroughly as does the butcher maker in his butter. This is the work in which the young feeder should perfect himself. The richer the flavor and the less the waste in beef when it is delivered to the consumer the greater will be the demand and the higher the prices paid. But the butcher maker can taste his material in all stages of its manufacture and thus has a quick and ready means of determining the flavor of his butter. The beef maker cannot test the flavor of his product until after the animal is slaughtered, and it is too late to change it. The beef maker should then learn what flavor is indicated by form and color and then breed select forms and feed them to produce form and touch that carry with them the desired flavor.

Mr. Gosling urged the students to thoroughly study form. Then to follow their fattened animals to the butcher's block to correct their ideas of form until they could tell just what outward appearance in a bullock would insure the desired flavor of the beef. He declared that until the beef maker learns this he is behind the butcher maker.

Mr. Gosling had a beef animal led into the ring and marked on him with chalk all the different cuts that the butcher would make if the animal were slaughtered. He went over the animal and showed the students by touch what portion of the animal being examined would make desirable cuts and where he would fall.

Mr. Gosling's lecture lasted an hour and was listened to with the closest attention. After the lecture, a bunch of Shorthorn heifers were taken into the ring and judged by the students, each man judging for himself. Mr. Gosling then gave his judgment on the heifers.

The attendance and interest in Mr. Gosling's work is constantly increasing. Three hundred and forty students are taking the work regularly.

CATTLE NOTES.

SUNNY SLOPE HEREFORDS have a national reputation. This is one of the largest herds in America, and the stock is of a very high order of merit as individuals, as well as the best of breeding. It is a good place to visit to get either a single cow or bull or a carabao.

"Hood Farm Calf Scour Cure and Digestive Powder cured three bad cases of scours in my herd. I find the Digestive Powder gives the calf strength and appetite." L. C. KATHRINE, Hebron, Conn.

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worthy proprietor, Mr. C. A. Stannard, and his assistant, very pleasant gentlemen to do business with. They will be pleased to show you their cattle, and if you don't find some that you want you will be hard to please. Look up his advertisement in this issue. Pay Sunny Slope a visit; you will never regret it.

THE STOCK YARDS at South Omaha for March, 1902, increased receipts over March, 1901, 601 cars, including cattle, hogs and sheep and horses. Receipts for the first three months of the year over the corresponding period in 1901, were 2,188 cars. Hogs shipped to market during March averaged only 220 pounds each, as against 222 last year. The winter difference is laid to scarcity of corn, forcing farmers and breeders to market the animals earlier than last year. The winter has been open, and for the most part mild. Cattle on the range are in better order than any spring for years, and cattlemen fed very little during the winter.

Omaha, Neb. T. R. PORTER.

Answers to questions in this department are given by Dr. E. B. White, farrier, 820 Main Street, for Missouri.

Mo. Write questions on one side of paper only, and separate from other business.

Those wishing a written reply privately must accompany question.

Address all correspondence to the professionals, opinion being one of private advantage.

all kinds that grew in 1901. Wheat straw has proven worse than corn fodder.

TREATMENT.—Every third day give as a drench one pound of Epsom salts in a quart of water; give slowly or it will be apt to choke her. Allow about three doses a week for the first week, then one dose a week for two or three weeks; by that time she ought to come out all right.

Last call for Mr. G. H. Angustus, Paris, Ill., Shorthorn sale at Kansas City, Mo., on April 11. There are some grand, good cattle in this offering, and if you want to pick up some snags we would advise you to attend this sale. Send for catalog, and then attend the sale.

The Havana Metal Wheel Company, Havana, Ill., are putting out a new log truck, in addition to their usual line of low-down wagons, the "Handy," etc. The "Harvest King" for haying and harvesting interests farmers. It is made so the front wheels will turn under rack or header box, with wheels 28 inches and 34 inches in diameter, 4-inch plain tire and 34 by 10-inch skeines; honestly made of good material and to carry two tons on country roads. Their catalog includes many styles of wagons. Their specialty is the grooved metal wheel's (and flat tires if desired). They fit any skein. Get metal wheels for your wood axle wagon if you wish. The Havana Metal Wheel Company, Havana, Ill., claim to be the most extensive manufacturers of metal wagon wheels in the world.

LAPS LIKE A DOG.—What is the best remedy for a calf that laps water like a reader.

Clay Co., Mo. Possibly some abnormality of the mouth, tongue or palate causes the unusual manner of drinking. However, all cattle before they drink taste the water by licking or lapping it, and often will not drink if the water has an unpleasant taste, and yet they can be starved to drink the filthiest water.

QUESTIONS.—What is the best remedy for founder in a horse caused by eating wheat?

What is the best to give a horse to cause an action of the bowels?

How long after giving the medicine before it will act? J. L. C.

Founders, proper, or laminitis, in horses is not caused from eating too much wheat, or too much of any kind of grain foods for that matter. When and as has been the case the effect is impaction of the stomach and in consequence there is indigestion or non-digestion. The best remedy for impaction is the stomach pump of a competent veterinarian. The quickest泻ative for a horse in perfect health is Barbadoes aloes. In such cases it takes effect in sixteen hours. As to physiotherapy this question is too general; different cases require different remedies. If you will specify or be more definite perhaps a more satisfactory remedy could be given.

A GOOD CUSTOM.—After an absence of some time Turner McBain of Boone county, Mo., reappeared on the market with a consignment of 15 steers that averaged 1,515 and equalled the highest price of the year for native beef steers, at \$6.75 per hundred. This is an old custom of Mr. McBain's—that of topping the market with his consignments.—Live Stock Reporter.

COOPER CO., CENTRAL MISSOURI.

Very little stock has died in this vicinity from disease or exposure. There was a good supply of roughness and a great deal of corn was shipped in and fed. Stock is usually in fair condition.

March 28—S. Y. THORNTON.

ONE BOTTLE CAUSTIC BALSAM CAN DO WONDERS.

Ridgeway, Ill., Jan. 22, 1902.

The Lawrence-Williams Co., Cleveland, O.

Will you please be kind enough to mail me full directions for using GOMBAULT'S CAUSTIC BALSAM? I purchased a bottle last summer and have lost the directions. Am I an honest trader and have you the Balsam in the cases, one of split on a valuable racing pony and on a bad ankle on a black pacer that I drove last year. The result could not be better, and I still have enough of the remedy left to cure all the lame horses in this county. I am a great admirer of your remedy.

GUARANTEED DEBORHER.

Farmers Do Your Own Dehorning and Save Money. Dehorning is a simple operation. Used by thousands of stockmen. Price \$1.00. We pay express. Agents wanted. All stock dealers buy our guarantee. GUARANTEED DEBORHER. C. G. COULSON & CO., BURLINN, IOWA.

AUXVASSIE HERD.

Borough Bulls, Southdown Sheep and Berkshire Hogs. Choice breeding. Individual merit. Stock sold worth the money. Call or address C. A. McCue, Auxvassie, Mo.

CLOVER LAIR

Horseman


STALLIONS ADVERTISED.

The following stallions advertised in the RURAL WORLD for the season of 1902 are well worthy of patronage:

Red Roy, 2:24%, by Red Heart; **Henry Heineman**, Ballwin, St. Louis Co., Mo.

Tennessee Wilkes, 2:27, by George Wilkes; **Monroe Miles**, Springfield, Greene Co., Mo.

Surpol, 2:19 by Electricity; **Alexander Renshaw**, Tipton, Cooper Co., Mo.

Wilkesby, Nutwood, 60%; **Limestone Artist**, 99, by Artis Montrose Si.

and the great show **Jackson Mammoth** 28; **L. M. Monsees & Son, Smithton**, Pettis Co., Mo.

Monitor Russell, 3327, by Hudson, 2331, son of Kentucky Prince, 2470, Dr. William Colman, Sterling Rice Co., Kan.

Woodruff, Nutwood, 60%; **Limestone Artist**, 99, by Artis Montrose Si.

and the great show **Jackson Mammoth** 28; **L. M. Monsees & Son, Smithton**, Pettis Co., Mo.

Monford, 2367, by Allendorf, 2:19%, son of

Kentucky Prince, 2470, Dr. William Colman, Sterling Rice Co., Kan.

Monford, 2309, by Allendorf, 2:19%, son of

Oward; **Thos. H. Moore**, Troy, Lincoln Co., Mo.

Wilkesgold, 2330, son of Red Wilkes; **H. Eisenbath**, Josephville, St. Charles Co., Mo.

About the 1st of May Geers will have

samped his big bunch of prospectus

campaigners now at Memphis to his satis-

faction. He will then weed out those

not coming up to the Grand Circuit

standard and send them home. This is

his usual custom. He has a green tro-

trotter by Prince of India which is expec-

ted to beat 2:10. The paper Shadow Chimes,

2:26% will be a formidable rival of swift

Audubon Boy. Direct Hal, a green pacer,

is labeled for a record "round 2:04 or 2:05.

The Monk, 2:08%, is off in the can-

present, and who can beat him in the

20 class?

RULES FOR BREEDING MARES.

The following rules, suggested by Pro-

fessor Cosar Ewart of Scotland, who

has made the subject a matter of thor-

ough study, are worthy of the considera-

tion not only of stallioners, but of every

farmer who is interested in getting a

large per cent of colts, and should be in-

corporated in the handbooks posted by

keepers of stallions and be made a ma-

ter of contract between him and the

farmer.

1. Mares which have been indoors dur-

ing the winter, and which are to run af-

ross during the summer, should be ac-

climated to the change before being ser-

ved. This is well understood by horse-

men who generally follow the above sug-

gestion, which provides for the mares

getting accustomed to the changes in

foot, temperature and surroundings. It

is well known by all practical horsemen

that digestive troubles are quite serious

in their effects on the pregnant female.

2. When any signs of being in season

are detected in the mare she should be

removed from mares believed to be al-

ready in foal.

3. Mares, more especially excitable ones,

should be served in the evening and kept

shut up apart from other mares or geld-

ings over night, and should, until all

signs of heat have disappeared, be kept

from any chance of teasing by other

horses. In the case of valuable mares, it

would pay the breeder to retain a com-

petent veterinarian to tide over the ex-

citent periods, when a calmative, both

constitutional (such as choral or opium

and iherine (as black haw), might with

benefit be prescribed.

4. Each mare, when bred, should be

carefully watched from week to week,

and every ninth or tenth day be tried

until the critical period (end of the 7th

week) is passed.

5. Mares in poor condition should not

be bred, but be gotten into condition by

the addition of grain to the daily ration.

6. For at least two months after ser-

vice the mares should be neither excited,

overheated or chilled, neither overfed nor

starved from their usual allowance, and

any drugging, except under professional

advice, should be at all times sternly de-

preciated.

BLUE BULL NOTES.

L. E. Clement.

Editor RURAL WORLD: J. H. Bryan of Lamar, Mo., has a yearling colt by Kankakee, son of Mambrino Russell, dam Glen Ellen, by Renshaw, son of Mambrino Russell. This is in-bred breeding of the right kind. Glen Ellen is a sister to Brownie, 2:22%, and is as square gaited a trotter as is owned in southwest Missouri. The colt is registered under pacing rules as Castle B. 0705. Mr. Castle brought Roulette from Correctionville, Iowa, to Lamar, Mo., where he broke this mare Glen Ellen. Mr. Castle drove Chimes C. to a trotting record of 2:26%, drove Brownie to his pacing record of 2:23%. This colt comes of the right kind of breeding, not through the fallutes. His sire is one of the best stallions in the United States, while Roulette was possibly more like Belmont than any son he ever sired.

I neglected to congratulate Mambrino, Jr., on his success with his Gale Allerton venture. I wish all Missouri breeders could be as well satisfied as he seems to be. I objected to Gale Allerton, he says, on account of the Daniel Lambert cross and its effect on the size. Gov. Colman hesitates to breed his best stallion, Elector, by Expedition, 2:15%, to his own mares, for the same reason. Elector is not only the best stallion he now owns,

but the best horse he ever owned, having a near cross on the side of both sire and dam to Pilot, Jr., 12. Yet being only about 15% hands, says he is too small. The smaller ones have nearly always been the successful ones. Masterjude was the exception among Hambletonian's sons. Strathmore might have been the greatest speed progenitor, except Abdallah, 15, of all the sons of Hambleton. If Kentucky had not been so sure he was too small. Late in life among the Blue Bloods of Indiana he showed me a sample of his powers, and is likely to finish very close to the front when the return are all in. I am sorry Dr. Buckner did not bad luck with his Baron Dillon colt. It is more than possible that a little more education before hitching him to a vehicle would have been profitable. I know it is hard to wait and walk round behind a good colt in and out, but sometimes it pays.

Golden City, Mo., has two new stand-

ard horses, Montore, by Anteros, spoke

of in the last issue of the RURAL

WORLD, and the other is a son of

Adrian Wilkes, dam Medora, by Mambrino Patchen, second dam also by a son of Mambrino Patchen. The horse is a good-sized pony with short tail and ears, walking at even pace with intelligence. He made a record last year at Lamar and was well patronized.

There is a possibility that Prodigal, son

of Owend, will come to southwest Mis-

souri. He is the sire of Bonnie Belle, the

pacer with a record of 2:19%, and one of

the best individual horses I know of.

He is a good man and tall, only a faint

star, good limbs and feet, long clean

neck, good eyes, a sensible head and

handsome ears, round barrel, good length

of body, short top line and long withers,

and plenty of propelling power behind;

what more could you ask for? You

might reply in the language of Splan-

"speed." Well, what else? "More

speed?" At present his speed is an un-

known quantity. From breeding and con-

formation he should possess it. The ques-

tion will be put to him later on.

C. S. Rutherford was born on the farm

where he now makes his home. His part-

ner, Mr. B. F. Price, is a recent importa-

tion to the race horse market.

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Home Circle

Written for the RURAL WORLD.
OUR FLAG.

God save our country's flag!
Long may it wave
In triumph o'er the free,
The noble, brave—
The sign of liberty—
Our fathers gave.

God save our country's flag!
With colors bright;
Still may it float afar
In Heav'n's pure light!
By every stripe and star,
God speed the right!

—DYPE.

Written for the RURAL WORLD.
CULTIVATE LAUGHTER.

When we are depressed or when deep sorrow touches the heart we prize the friend who sheds for us the tear of genuine sympathy. There are times when we lay bare our disappointments and tell to some one the story of our toll and our trials, and do this simply that we may have sympathy; so many hearts are hungering for the word and tone which genuinely say, "I am sorry for you." But the friend who has the power to enable us to laugh at life's vexations has really done the most for us. Such a one will drop a tear of sorrow when our hearts are aching, and will also bid us cheer up when our trials are such that we need to be fortified to bear them bravely rather than to weep over them.

There is nothing more encouraging than a good laugh when it proceeds from a truly merry heart. Recently, when burdens seemed to weigh heavily and life seemed all work, two strangers were passed by the way who had met with some accident. They were laughing heartily over it. They were living the philosophy contained in the little old saying, "Don't cry over spilled milk." Their merriment was infectious, and all who saw them amused countenances were soon smiling. The cloud had passed from writer's mind.

Then too a smile and the ability to see the fun in some deed or transaction which is about to provoke anger can't be too highly commended. Many an exchange of bitter and tart words, which are later regretted, would be avoided if the provocation to anger could be seen from a humorous view. Of course the spirit of ridicule is not meant. Nothing is more exasperating or cruel to an over-sensitive person, especially a child.

Teach the child to laugh at his own errors when they simply result in disappointment and loss to him. If through carelessness and heedlessness he has brought misfortune to another, then the case needs different consideration.

In one of the most delightful homes I know, where the parents and children are most companionable, the humorous side of vexations is strongly emphasized. The mother of this family meets many a childish annoyance with a bright word of wit which sends her boy away laughing. A daughter of this same family told the writer that every year she more and more thanked her father for teaching her to see the humorous side of life. This daughter is to-day a mother and presides over a happy home and she and her father have that delightful companionship which brightens both their lives. Laughter will keep the heart young. There is abundant opportunity to be serious in life, and yet to need wholesome mirth to keep our hearts in tune for life's labors and duties.

MRS. MARY ANDERSON.

Caldwell Co., Mo.

Written for the RURAL WORLD.
PANSIES IN MARCH AND OTHER THINGS.

Here with I send a pansy picked today, March 16, in my front yard. The pansies have been out all winter without any covering, and there are several blossoms beside this one. How many can do better than that?

This is a land of surprises. They have round rich rose quartz that has gold in it within a few hundred feet of our house lately. The first find was over two miles from here. A man who was hunting found it. There seems to be a vast bed of it. How glad it will be to pay for working. The man who found it said "It is God's gift to me" and he called it the "Mountain Star Claim." If it is as it promises, the day star of hope will have arisen on more than one of the toilers on these great hills. Spring is coming fast and the men are opening their claims now, so we shall soon know if it is as it promises. The Klondike will not be richer. If not, then there will be some disappointed people here.

Fine facilities for transportation are being provided here by dredging a roadstead across the lake four miles. Boats can run at all seasons to the cities of the coast via the Sumas and Frazier rivers.

My eyes are better, I trust. I am doing a great deal of work with them—far too much. I fear, but there seems no help for it now.

We sustain a great loss in Judge Miller's death. We miss his good letters so much, though we appreciate the other splendid writers who are taking up his work. Each one has a place that no other can fill. The night I heard he was gone I awoke crying and saying, we can not spare him. The world hath need of such men. Our tenderest sympathy goes out to the bereaved ones of his household.

The winter has been very pleasant so far, and the grass is growing nicely. We had only one storm, not enough to kill panicles, as you see.

—ELLA CARPENTER.

Whatcom Co., Wash.

S.—Did I tell that Gertrude was married? My little daughter, who has written several letters for the RURAL WORLD in days gone by, has done well, we think, and so far as we can see has a long, beautiful life before her, with a kind, good husband who is able to take care of her.

E. C.

Take

A Bellows

when you get home with that bulk coffee and blow the dirt and flies and foreign substances out of it. Then open a package of

Lion Coffee

see how clean and fresh it looks and note its rich aroma.

The sealed package insures uniform quality.

Written for the RURAL WORLD.
LAUNDERING CURTAINS.

It is not usually convenient for farmers' wives to send lace curtains to the laundry, and as they become soiled after using them a few months, it becomes necessary to learn to do the work at home. The following method is an easy one, and after giving it a trial, we feel sure that any housekeeper would find it more satisfactory than to trust them to the tender mercy of the ordinary washerwoman.

Take the curtains down carefully, remove all the pins or small signs that have been used to keep them in place, and shake thoroughly to remove the dust. If there are any broken places, these should be darned with fine thread so that they are put in the water, for very small rents are apt to become large holes during the laundering process unless they are carefully mended.

Prepare half a tubful of hot water, adding a little borax and enough soap to make a strong suds. Let the curtains soak in this for half an hour, then rub gently between the hands, and work them up and down until the water looks dark. Pass them through the wringer, being careful to keep them from catching on a nail or screw, or tearing in any way. Two suds prepared in the same way are usually needed to get them clean. The borax saves the curtains by lessening the amount of rubbing needed to get them clean, and should always be used for washing anything that requires careful handling, for it does not injure the finest fabric. Rinse in clear water, then dip in a thin boiled starch that is slightly tinged with blue. If a clear white is desired, saffron tea added to the starch will make them a delicate cream color, or cold coffee will give them an ecru tint.

A frame for drying curtains may be purchased for a reasonable price, or a very good one can be made at home after the style of the old-fashioned frames. But while they are very convenient, they are not indispensable, for the curtains can be nicely dried without them. Cover the carpet in a room that is not in general use with clean sheets stretching them smoothly and taking care not to stretch the curtains on these, being careful to have them straight, and pin each scallop to the sheet. Open the windows and they will dry quickly. They will not need ironing, for they will be free from wrinkles and have the appearance of new curtains.

Lyon Co., Kan. E. J. C.

RUBBARD.

Every farmer's garden should contain a row of rhubarb. Those who have this product of the garden this spring will relish it, as fruit in many farm homes has been among the luxuries. There has been a tendency in recent years to look with scorn upon the row of rhubarb, regarding it as out of date, while the improved varieties of berries are held in high favor. Both have their place on the farmer's menu. One reason that rhubarb has been in disfavor is because of the utmost care required in its preparation. It should not be used when too old, as it will be tough and stringy. Prepared carefully by the following recipes, rhubarb will be found to be delicious:

Rhubarb Tart.—Line a p'ne pan with good paste, brush it over with the white of an egg, and bake in a quick oven. When done fill the pie with rhubarb marmalade, and cover with a mercury made by whipping two eggs to firm snow with one cupful of sugar and the juice and grated yellow rind of half a lemon. Serve cold and do not preface the meringue until just before serving.

Rhubarb Compote.—Cut red rhubarb into two-inch lengths. Barely cover with cold water, and cook very gently until the rhubarb is tender, but not until it falls to pieces. Drain the water off carefully, measure it, and allow an equal amount of sugar. Let it boil until it becomes a rich syrup. Place a mound of plain boiled rice in the center of a glass dish, surround it with the cooked rhubarb, and when the syrup has partly cooled, pour it gently over the rice and rhubarb. Serve very cold.

HOW TO PRESERVE GOOD HEARING.

You want to be able to hear well, even if you live to be ninety or one hundred? Then keep the outside ear clean and let the inside alone. Nature has furnished a cleaning apparatus for the ear passages. Don't tamper with them.

The entrance to the auditory canal is guarded by fine hairs that keep out dirt and insects. In the lining membrane of the canal is an oily, yellow wax that is bitter to the taste. On account of this bitter wax, no insect will of its own accord enter the canal. It is only by accident that an insect ever gets in the ear.

In April, when the warm, sunshiny days come, we can go out and rouse up the old dry herbs, dig in the fresh earth, plant garden seed, make up the flower beds, set the incubator, look after the wants of our biddies and get the brooder and yard in readiness for the coming baby chicks. When the more settled weather of May comes we will take down the heating stoves, have our rooms freshly papered, carpets cleaned and freshened by a good beating and set our houses in order for the hot days of summer. During the early days of spring we open the doors and windows and let the sunshine in and the fresh air blow through the houses; thus we are making ready. By the way, did you ever try using shoe boxes (the postboard boxes, I mean) for keeping scraps of calico linings, bits of yarn and, in fact, anything one wishes to put aside for future use? I find them much more convenient than the old style pie bag, as each box can be labeled, and one can tell at a glance just what the contents are.

The day before one really commences to clean a room it is a good plan to prepare something substantial in the way of food as bread, pie, cold meat, baked beans or something that can be quickly warmed or prepared so one will not lose much time from cleaning to cook.

The wax in the ear is absolutely necessary to keep it in a healthy condition. Never try to get it out. Always remember that Nature will not let the inner ear become dirty. Never insert the end of a wet towel or cloth into the ear to try to wash out the wax. Washing the ear is dangerous—and, if persisted in, surely produces deafness—to scratch the ear canal with pins, tooth picks or hairpins.

Never put cold water or any other cold liquid in the ear. When going in swimming insert cotton or, what is still better, a little wool in the ear. When out in a cold wind or snowstorm it is best to protect the ears. Avoid blowing the nose violently in case of cold. This sometimes causes the inflammation to spread into the Eustachian tube, and causes deafness. Children's ears should never be boxed. A blow on the ear often drives the air with such force against the drumhead that it is ruptured by the shock.—Philadelphia Record.

MISPLACED ENERGY.

A quaint story of a master builder and a British workman is told by a trade journal. Having heard that the men did not start work at the proper time, the employer thought he would drop down about 6:30 one morning and see. Going up the yard, he caught sight of a John standing smoking, with his kit not even opened. Simplicy asking his name, which he found to be Malcolm Campbell, he called him into the office and handing him four days' pay, ordered him to leave at once. After seeing him up to the foreman and explained that he had made an example of Malcolm Campbell by paying him off for not starting at the proper hour.

"Great Scott, sir!" ejaculated the foreman, "that chap was only lookin' for a job."—Philadelphia Telegraph.

ANY LADY

Wanting a good Cook Book made up of common receipts in French, compiled by a housewife, the whole country can have it sent free by enclosing two cent stamps for postage. Address

Majestic Manufacturing Co., St. Louis.

INTERFUSED.

We must buy and sell in the markets; we must earn our daily bread; But just in the doing these usual acts may the soul be helped and fed. It is not in keeping the day's work and the day's prayer separate so, But by mixing the prayer with the labor, that the soul is taught to grow.

For if sweeping a room by God's law is a service He deems to bless, And mending a kettle worthily is working for Him no less Than steering steady the ship of State, or wielding the sword in war,

Or lifting the soul of man by songs to the heights where the angels are—

Then none may deem it wasted time who stands in an humble spot.

And digs and waters a little space which the hurrying world needs not;

For the Lord of the harvest equally sends His blessed sun and rain On the large work and the little work, and none of it is in vain.

—SUSAN COOLIDGE.

Written for the RURAL WORLD.

PREPARED FOR HOUSECLEANING.

"Cheer up! Cheer up!" sings the robin; "sunshine and spring are here once again." And the sunshine peering into every crack and cranny reveals to the careful housewife an amount of dust and dirt that has accumulated in spite of the daily sweepings and dustings which she has given her house the whole winter through; and she forthwith declares war on all dirt, and to abolish it must clean house. Let me tell you, it is a wise policy to "make haste slowly" in that matter of housecleaning. Spring is a flit, and while she may stay a few days and be as pleasant and available as any one could wish, the next thing she does turns the col'd shoulder to us and is all trows and tucks. Better follow Dame Nature in her way of housecleaning. Did ever notice how, in March, she sets her cleaning going by sweeping the old earth with her broom of wind until every nook and corner are brushed clean of the old dry leaves and filthy accumulations of all winter? And all the while the sun is getting in his work of warming and cleansing. Then, in April, she washes the brown earth with showers, and after all this cleansing, in May she carpets the earth with fresh, green verdure and everything in her new suit is ready to greet. Madam Summer. We, too, like Dame Nature, can be making ready for the annual cleaning, and this is a good time to commence, if it has not been done before.

We have been preparing at our house all winter. Soon after the holiday festivities and their attendant work were over we commenced looking over drawers, cupboards, wardrobes, boxes and, in fact, most everything stored away, working up and making over everything that could be used and casting away the useless.

Scrapes of new calico can be pleated up into quilts, and a nice, quick way of making a quilt is to piece it crazy fashion, piecing it on pieces of old cloth, such as calico, old shirt or old muslin. Finish on the outside by stitching every seam on the outside with the sewing machine, using a bright-colored silk-finish thread for the upper thread. Line the quilt with something a little heavier than calico, like cretonne or flannelette or even outing flannel. Knot it like a comfort and you have a nice snug quilt at only the expense of the lining and thread. You have used up your calico scraps and old cloth made them serve a useful purpose, instead of filling up your drawers and boxes with useless things.

A half of an old flannel blanket, two old brown flannel shirts and three yards of blue out-of-flannel, we made into a nice little lap robe. The old shirts made one side, the out-of-flannel the outside, and the old blanket was used for an inter-lining.

It is useful on cold days to put under the plush robe, and in warmer weather can be used alone.

We forgot to say we quilted it on the sewing machine, using red thread to do the stitching. An old quilt that had seen its best days was covered with a pieced top and calico lining and quilted on the sewing machine, and will do duty a number of years. A couple of comforts were recovered, but we tied them. And so all the cold, stormy days of January and February we were making ready for the coming spring and housecleaning.

New calico aprons, wrappers and dressing sacques were made, carpet rugs sewed and several new pieces of fancy work and new sofa pillows were made.

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THE KILLING HOUSE, where the poultry is dressed for the market, is designed of especial mention. The floors of the house are raised toward the rear wall, so that all water and refuse may be drained off easily after a day's killing. In the height of the season the men go to work at three o'clock in the morning. There is a little tramway which traverses the entire plant, and the live birds are brought to the killing house in cars. The arrangement of this house is as complete as it is possible to make it. It has long picking benches, which extend the entire length of one side of the building. Each operator has a window to afford him plenty of light. There are scalding vats, feather beaters, cooling troughs, dripping racks, packing benches, feather presses, billing desks, ice breakers, platform and hanging scales, and numerous other contrivances, so that thousands of birds can be turned out with a speed that seems almost incredible.

CHICKEN FEED.—Everything about the place is conducted on a wholesale basis.

There is a root and vegetable storehouse, where thousands of bushels of beets, carrots, turnips, cabbage, etc., are stored every fall for winter use.

This house is built below the level of the ground to protect its contents from the frost. In one of the buildings there is an immense food cooler which holds 1,000 gallons. It occupies two stories, being loaded from above and emptied from below.

Several barrels of fresh meat are dumped in here at once.

ROCKY HILL Poultry Farm—Wanted a special hen, Silver Leghorn, White Leghorn, Barred Rock, Black Rock, White Rock, and White Leghorns.

W. B. THURMOND, Louisiana.

EGGS FROM HIGH SCORING BIRDS

White Wyandottes, Peck Ducks, White

Holland Turkeys and White Leghorns.

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Holland Turkeys and White Leghorns.

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RUPTURE
Quickly and Cured

Have practiced over 50 years here, curing nearly all cases. No pain or cutting. No pay money. Booklet on rupture sent on request.

W. A. LEWIN, M.D., 64 Washington St., St. Louis, Mo.

A. J. MILLER, M.D., 211 N. 7th St., St. Louis, Mo.

ARTICHOKE

Will yield well dry season. Wonderful crop. Free circular how to plant, cultivate, etc., and prices.

J. E. HAYNES, Ames, Ill.

IMPROVED CHESTER WHITES.

Orders now taken for spring pigs from large, smooth, fat, white animals. Prices reasonable.

H. RAUSCHER & SON, Ashton, Mo.

POLAND-CHINAS.

160-LB. PIGS by U. S. Chief Tecumseh 2d, S. B. Perfect I. Know. Our Perf. Perfect. S. Black China. 2d, S. B. 160-lb. of equal breeding. L. A. SPIES BREEDING CO.

St. Jacob, Ill., near St. Louis.

WALNUT Valley Farm - Herd - Poland Chinas.

WALNUT Valley Farm - Herd - Poland Chinas.

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Black U. S. Chief Perfection 2nd and Tecumseh at mod. prices. Ernest W. Wallen, Monett, Mo.

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Registered Jersey cattle and Plymouth Rock chicks.

Young stock for sale at all times.

C. H. JONES, Pawnee, Ill.

FOR SALE.

Pure Bred Poland China Sows and Gilts and Shropshire Down Ewes, bred.

J. W. BOLES, Auxvasse, Mo.

DUROC-JERSEYS.

Big 2 HERDS Duroc-Jersey and Chester White Hogs. No screen-
ings crated. Write for catalog.

J. E. HAYNES, Ames, Ill.

Duroc-Jersey and Berkshire Hogs!

Breeding, satisfaction guaranteed or you may return at my expense.

S. C. WAGNER, Pana, Ill.

40...DUROC-JERSEYS...40

Of Bred Sows and Gilts of Best Strains.

S. G. RICHARDS, Sturgeon, Mo.

POLAND-CHINA.

Gill-edge pedigree and individual merit combined. G. L. O'BRIAN

& SON, Carmi, White Co., Ill.

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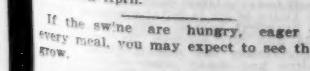
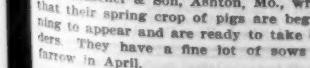
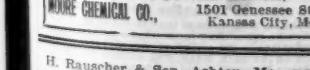
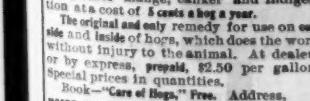
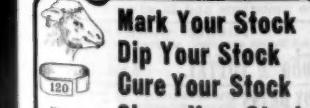
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St. Louis Ticket Office:

EIGHTH AND OLIVE STS.

**The Pig Pen**

GOOD PROSPECTS.

can safely disregard them at the expense of more useful features.

The man who insists that a boar shall be perfect to a harr is very apt to get this merely fancy excellence at the expense of other qualities, of far greater practical importance. It would be very nice to see an entire herd perfectly marked, but it is of much greater moment to have the herd uniformly good in chest, back, loin, ham, feet, head and jowl. These are points that count, and it is with a view to them that the boar should be selected early, if for no other reason than that later in the season the kind of pig that is wanted becomes doubly difficult to raise.

RAISING HOGS AS A SCIENCE.

On a farm just 15 miles south of Kansas City an experiment is being made which is being watched with interest by stock raisers all over the United States, and consequently it makes business go rather heavily for us, and our patronage in advertising rather slow. But we look for better times and expect the good old RURAL WORLD to help us on grandly this year. When the prospect for good crops looks up before us, it will put new courage into our patrons and our purebred hogs will be in lively demand, and we expect to furnish them for the people.

J. L. ZUMBRUN.

Livingston Co., Mo.

SOWING PEAS FOR PIG PASTURE.

I prepare my ground as early in the spring as weather and ground will permit, and drill two bushels per acre. I think it a good plan, says J. V. L. Garrett, in "Farmers' Guide," to mix about one-half bushel of oats per acre with the peas; this gives a variety which pigs relish very much. We can usually turn on the peas from the 15th to 20th of July. I think every farmer who raises hogs should grow a patch of peas; then the pigs will grow nice and thrifty on peas. Peas won't fatten the pigs, but they make bone and muscle, and put them in splendid shape for finishing off on corn. This is a side issue and to utilize and get the benefit of my ground the entire season, as well as for the development and growth of my pigs, and to give forage for my pigs during the drouthy period, I mix and sow four quarts of clover seed and two pounds of Dwarf Essex rye seed per acre, turning the soil so the will throw the seed ahead of the hoe. If the weather permits I always roll the ground after I get through sowing. I find this is an excellent plan for while the pigs are greening the peas and oats they will nip at the rye and clover, and after the peas are gone this affords excellent pasture for the pigs until killed by frost late in the fall.

SECURING A GOOD LITTER OF PIGS.

Caring for the brood sow and the manner of feeding them to obtain best results are important questions. A great deal depends on the care and treatment the brood sow receives while carrying her pigs. She needs plenty of sunshine and outdoor exercise during the day, and a nice warm place under shelter at night. Avoid letting the brood sow run in the same lot with colts or horses, or in the same barnyard. Do not give them the opportunity to go from one field to another by jumping over broken fences or crawling through narrow openings. Give them a place where they can root to their hearts' content. It is good exercise, they enjoy it, and it is in keeping with their nature, says the "N. E. Homestead."

In addition to good care and kind treatment, the feed must be looked after carefully.

To balance a ration simply means to stop feeding an excess of starch, and feed more protein, the strength, flesh, bone and muscle-producing material. How can protein be best secured? There are several conditions to be considered. It must be remembered that protein in feed has two forms—digestible and indigestible. The corn concentrated feeds contain a large percentage of protein and the results obtained in practical feeding tests show that the protein in these products is almost wholly digestible.

Protein can also be obtained in a non-digested meal, but it is very dangerous to feed this product to hogs particularly to feed sow sows. It contains a large percentage of indigestible protein that is of no value for feeding purposes, and in addition to this cottonseed meal contains elements of a very dangerous character. Buffalo gluten feed and germ oil meal fed in equal quantities with corn in the form of slop are meeting with favor among hog men. They can be fed with absolute safety; they balance the ration and are sold at prices that enable the farmers to feed them at a profit.

SELECTING THE BOAR.

A very common mistake among those engaged in swine growing is the postponement of the purchase of a herd boar until his services are needed. There is a variety of considerations that make it advantageous to choose the herd boar early. If one waits until the service season is at hand and then opens up correspondence with breeders, he will generally find that there are a very large number of persons in the same situation, all wanting boars at once and wanting them, too, from herds from which the best have already been culled by swine growers having a larger foresight. If the selection is made late and the animal should prove unsatisfactory in any way, it is too late to provide a substitute that does suit, and the result is that the sows are bred to an animal that is objectionable, and when the litters come they are not at all what is desired, says the "Progressive Farmer."

The boar to be used for next season's pig crop should be selected as a pig, brought onto the farm early, and quarantined on the farm for a sufficient length of time to guard against the introduction of disease by him, and he should likewise have ample opportunity to become familiar with the surroundings and feel at home before the service season opens.

He should be chosen with the conformation of the sows upon which he is to be used thoughtfully in mind, so as to counteract and correct their defects and heighten their excellencies. If the sows have been produced on the farm it is probable that they are of one type, with good points in common and with like defects as well. The latter should be kept in mind in selecting the boar. If the sow is deficient in back or ham, or indeed in any point of the useful kind, the boar should be strong at such points. In advising the care in selection, it is the essential or utility points that we have chiefly in mind.

Perfection in mere markings and the like is, of course, desirable among those who are breeding fancy herds, but the swine growers of more utilitarian views

The Shepherd

SHEEP SHEARING MACHINES.

Editor RURAL WORLD: We read with much interest the communication in your publication of the 18th of March last, wherein Mr. H. C. J. of Linwood Farm, Miller Co., Mo., related the trials and disappointments he experienced when using a clipping machine. The best and simplest machine of any character ever invented to lessen the labor of man or woman, has never given universal satisfaction, for some one will find some reason to criticize and condemn. We have manufactured, and there is now in daily use thousands of our sheep clipping machines and they are endorsed by those who use them, whether they own but a few or thousands of sheep. Had Mr. H. C. J. written us and told the difficulty he was experiencing, we would have given the matter our immediate attention, would have advised him what the difficulty was, would have sent a new machine if necessary, or would have sent a man to his farm to prove to him that our clipping machines are all we claim for them. We know that our clipping machines are perfect in construction, simple in mechanism, easy to handle, and in every way superior for the purpose intended when compared with shears, as the railroad to-day is ahead of the means of transportation in vogue one hundred years ago. We know that you are desirous of doing what is right in this matter. You have heard the complaint of Mr. H. C. J. Will you hear the other side? We therefore invite you or any representative of your paper to come to Chicago to investigate our plant, to see the evidences of the success of our machines, and to personally learn that our machines are used and endorsed by all the leading sheep growers in the United States, and that the experienced can appreciate them in shearing sheep just as easily as one can use the ordinary hair clipping machine on the head of a schoolboy. We therefore ask that you have our machines investigated and report in accordance with the facts.

CHICAGO FLEXIBLE SHAFT CO.
Per T. J. Clark, Secretary.

Upon receipt of the above we sent one of our representatives to Chicago with instructions to investigate fully the Chicago Flexible Shaft Co. and to ascertain all about their clipping machines and to learn, if they are giving satisfaction to users, as claimed by the makers.

Our representative reports that the Chicago Flexible Shaft Co. is incorporated under the laws of the State of Illinois, owns and occupies an eight-story brick building in which is machinery of the latest pattern, and are financially responsible. They are exceedingly proud of their clipping machines, and claim that they are manufacturing a machine which lightens the labor of the shearers, increases the quantity of wool clipped, and leaves the sheep evenly and mercifully clipped. While making this investigation our representative called upon Mr. L. E. Burch, president of the "American Sheep Breeder," and asked him his opinion of the sheep shearing machine manufactured by the Chicago Flexible Shaft Co. He said:

"The 1902 Model Hand Power Shearing Machine did remarkably fine work at the Pan-American, where it was clearly the center of attraction at the sheep barns. Good sized pens of sheep were shorn morning and afternoon during the two weeks of the sheep show and always to deeply interested and delighted audiences. The shearing was quickly and beautifully done. No matter what the grade or breed of sheep brought forward, they were clipped so nicely as to be fit for a dress parade exhibition. Part of the time the machine was driven by electric or steam power, and part of the time by hand crank, but always with the same rapid and perfectly sharp shears, looking almost smooth as a plaster cast. The sheep were indiscriminately drafted from the butchers' stocks at the stock yards and represented all manner and breed of sheep, from the bony, angular scullion to the well-fed Down, Merino, Rambouillet, Delaine, Oxford, Shropshire, Southdown, Hampshire and the long-wooled grades. The visitor was familiarized with every detail of machine sheep shearing. From 70 to 90 sheep were rapidly shorn without a re-ground of the knives. The 1902 Model Hand Power Shearing Machine as shown at Buffalo is certainly a great mechanical triumph, entertaining crowds of six to nine thousand people at the Pan-American. It has also entertained equally large and interested crowds at the fall sheep sales and shows in England. The Chicago Flexible Shaft Co. should be congratulated upon their splendid exhibit at Buffalo, where tens of thousands of Canadian, American, Central and South American and Island visitors were delightedly entertained with the perfect work of their latest sheep shearing machine. I know all about these machines, have tested them in every way, use them constantly on my sheep ranch and honestly feel that no sheep raiser can afford to be without them."

Upon asking the Chicago Flexible Shaft Co. if they had any letters from prominent men in the sheep breeding business endorsing their sheep clipping machine, Mr. Clarke, secretary, replied: "Letters of endorsement?" Why, by the hundreds. Indeed, sir, we don't receive any prominent man in the sheep breeding line who does not endorse our machine. Let me show you a few such letters. Here is one from Mr. Conford A. Tyler of Mottawa, Mich., treasurer of the New Hampshire-Dover Breeders' Association of America, who says: "It shears rapidly, smoothly and well. We had never seen one of the improved machines, and were entirely green as to its working, but we have shorn a 350 ewe in 45 minutes. I was prejudiced against it to the extent that I should never have used one. I was wrong. The machine is superb and an absolute necessity."

Geo. McKerrow, President American Oxford Down Sheep Record Association; President Wisconsin State Board of Agriculture and Superintendent Wisconsin Farmers' Institute, writes:

"More than the price of shearing per head is saved on each sheep in wool, and the price is again saved in freedom from cuts on valuable sheep."

Henry Stewart, author of "Stewart's Shepherds Manual and Domestic Sheep," the standard text book on sheep and wool, and the highest authority on sheep in America, writes:

"The machine is as far ahead of the hand shears as my self-binder is ahead of the old-fashioned cradle."

Mortimer Levering of Lafayette, Ind., Secretary of the American Shropshire Farmers' Institute, writes:

"The machine is a great improvement over the hand shears, and is a great convenience."

Mr. Miller states that he can prove this statement by reliable witnesses and will not take off a fraction of an inch in the diameter of the bushes.

This incident simply goes to show the extraordinary strength and capacity of modern harvesting machinery as built by the Deering Harvester Company.

"Having tried your New Model Hand Power Shearing Machine, I pronounce it

I SELL FARMS

RESIDENCES, STORES AND OTHER REAL ESTATE, NO MATTER WHERE LOCATED

INSTALLMENT BARGAINS.

A Big Farm Bargain. C729—At Sterling Junction, Worcester Co., Mass. We have 160 acres of land, 100 acres of land, 20 acres timber, 2 houses, 2 barns and other buildings, all in good condition. Orchard of 100 trees. Fish water. Good location for all kinds of business.

Offer refused.

111—A North Carolina Bargain. This is a farm of 50 acres in Burke Co., 25 acres under cultivation, 100 acres timber, 2 houses, 2 barns and other buildings, all in good condition. Orchard of 100 trees. This farm is situated in one of the best sections of the State and is very accessible from railroad station. Price only \$550.00

Offer refused.

A Good Farm in Connecticut. 702—Situated in Litchfield Co., 3 miles from Ellsworth. Contains 120 acres, nearly all good productive land, 37 acres timber. Good building, fence, roads, trees, fruit and flowers.

A bargain at \$3,500.

121—700 acres in Broadwater Co., Montana. This is an excellent property admirably located on the Missoula River, 10 miles from town. All the land is good and can be plowed. Fair buildings, Schoo nearby.

Offer refused.

My plan has given pleasure to others than the owners of

